

## REMARKS

The above amendments are believed to deal with each of the issues raised in the Official Action under reply.

In the drawings, Fig. 5C has been amended to replace "534" with --530--, and the dimensions, many of which are unreadable have been deleted. Figs. 6, 7 and 9 have been designated as --PRIOR ART--.

Claim 1 has been cancelled and replaced with claim 34.

Claims 7, 9, 16, 19, 20, 28, 29, 30, 32 and 33 have been cancelled.

Claim 6 has been amended to indicate that the course stage isolation mount communicates with the navigation and flight control systems whereby accelerations of the fine stage isolation mount are substantially less than accelerations of the aircraft during flight. Because the course stage isolation mount is connected to the navigation and flight control systems, changes in accelerations of the aircraft during flight are communicated to the course stage isolation mount which compensates for such accelerations to reduce accelerations of said fine stage isolation mount, and consequently the fine stage isolation mount and the gradiometer are caused to travel along a smoother flight path than the aircraft.

Claim 14 has been amended to indicated that the course stage isolation mount includes an adjustable control system for attenuating displacements of the gradiometer at various low pass cutoff frequencies. It is the course stage isolation mount which is adjustable to alter the frequencies at which the course stage isolation mount reacts to accelerations of the aircraft.

Claim 16 has been cancelled.

Claim 20 has been amended to indicate that the system of claim 19 includes adjustable control systems for attenuating displacements and vibrations at various first and second low pass cutoff frequencies. It is not the frequencies which are adjustable, but the control means which are adjustable.

Concerning paragraph (8) of the Official Action, new claim 34, which replaces claim 1 properly calls for a combination of a gravity gradiometer for mounting in an aircraft, a course stage isolation mount for mounting in an aircraft adapted to attenuate displacements of the gradiometer relative to a flight path ideal to the measurement of gravity gradient and a fine stage isolation mount carried by the course stage isolation mount and supporting the gradiometer for attenuating vibrations of the gradiometer relative to a flight path ideal to the measurement of gravity gradient. The object of the exercise is to achieve a smooth flight path for the gradiometer, whereby accurate measurements of variations in the gravitational field of the earth beneath the aircraft can be measured.

Claim 11 has been amended to indicate that the course stage isolation mount includes a control system for determining and controlling the position of the fine stage isolation mount. Reference to the controlling being constrained by interior dimensions of the aircraft have been deleted. As mentioned above, and as claimed in new claim 34, it is displacements and vibrations of the gradiometer which are being attenuated.

Claim 13 has been amended to indicate that the control system of the fine stage isolation mount directs the fine stage isolation mount towards a home position relative to the aircraft as stated by the examiner.

Claim 14 has been amended to indicate that the course stage isolation mount includes an adjustable control system for attenuating displacements of the gradiometer at various low pass cutoff frequencies.

Claim 16 has been cancelled.

Claim 18 has been amended to delete reference to both "gyroscopes".

Claims 19 and 20 rejected under 35 U.S.C. 112 and on the basis of the Tryggvason et al reference have been deleted.

Claim 21 has been amended to call for means for isolating displacements "of the gradiometer" and means for isolating vibrations "of the gradiometer".

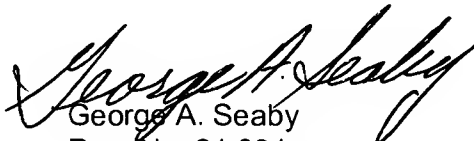
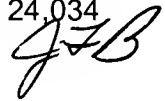
The word "vibrations" in claim 23 has been replaced with --accelerations and displacements--.

Claim 31 has been amended to indicate the displacements and vibrations being attenuated.

Early and favourable reconsideration of this application is requested.

Yours sincerely,

GAS:mg  
Encl.  
Seaby & Associates  
603 - 880 Wellington Street  
Ottawa, ON K1R 6K7  
Tel: (613) 232-5815  
Fax: (613) 232-5831

  
George A. Seaby  
Reg. No. 24,034  




*Approved  
7/25/03*

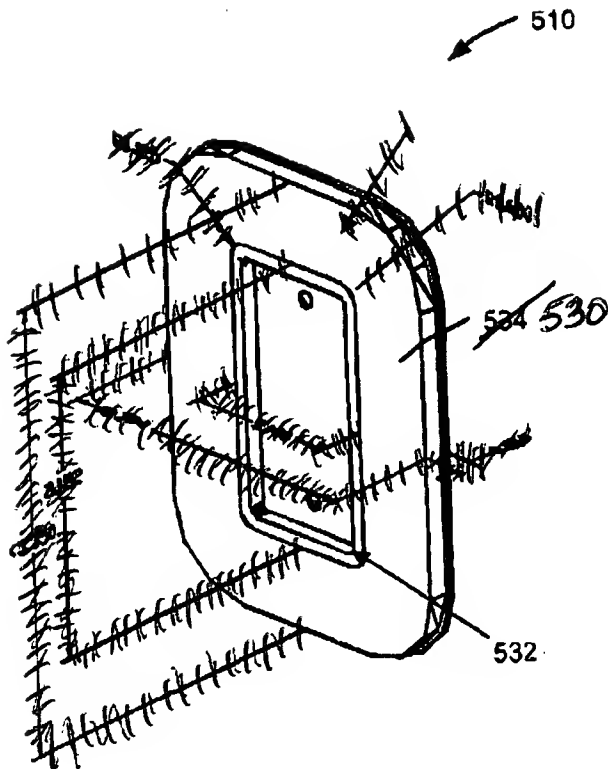


FIG. 5C

RECEIVED  
MAY 28 2003  
TC 2800 MAIL ROOM

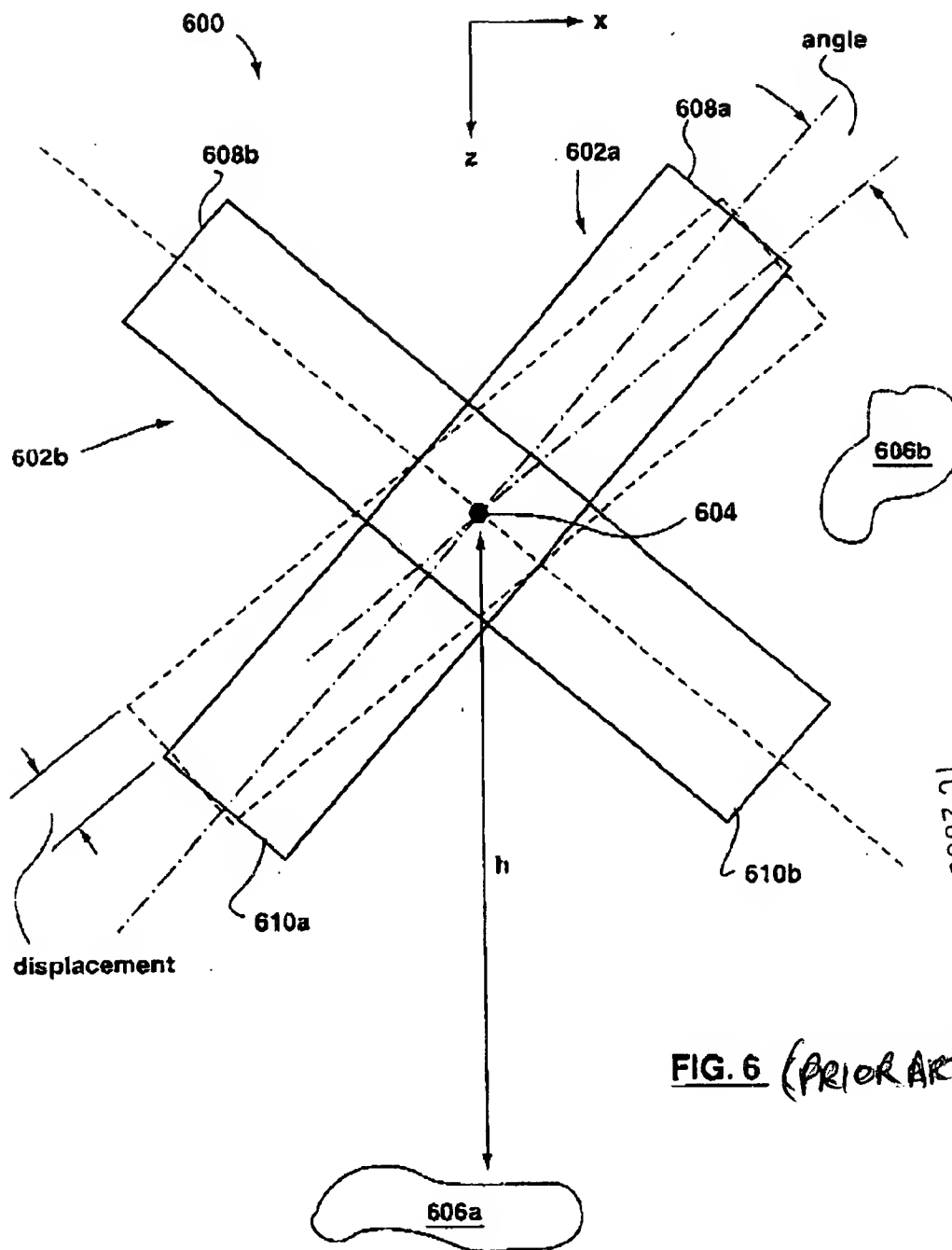


FIG. 6 (PRIOR ART)

RECEIVED  
MAY 28 2003  
TC 2800 MAIL ROOM

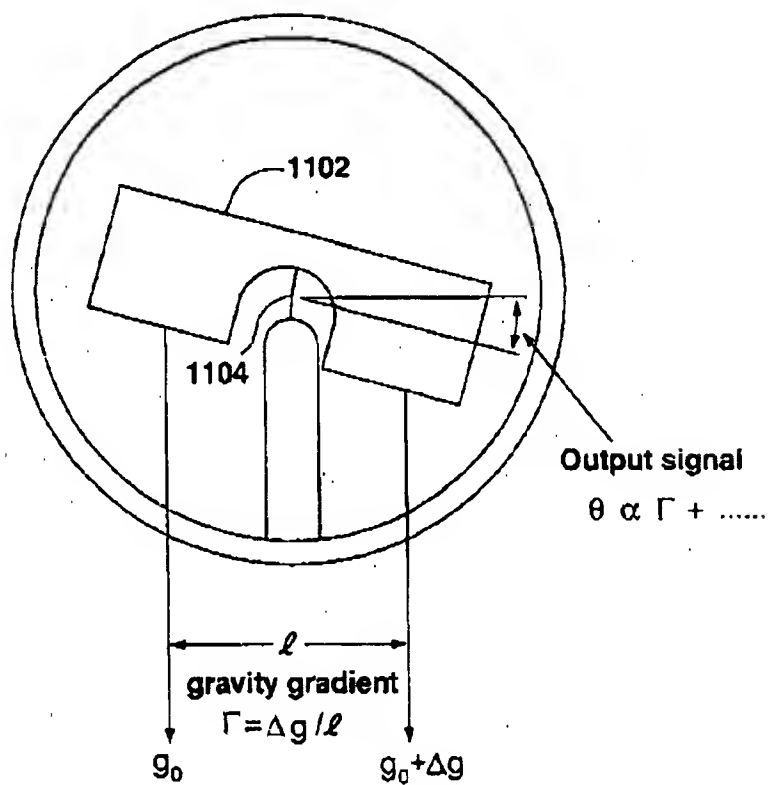


FIG. 7 (PRIOR ART)

RECEIVED  
MAY 28 2003  
TC 2800 MAIL ROOM

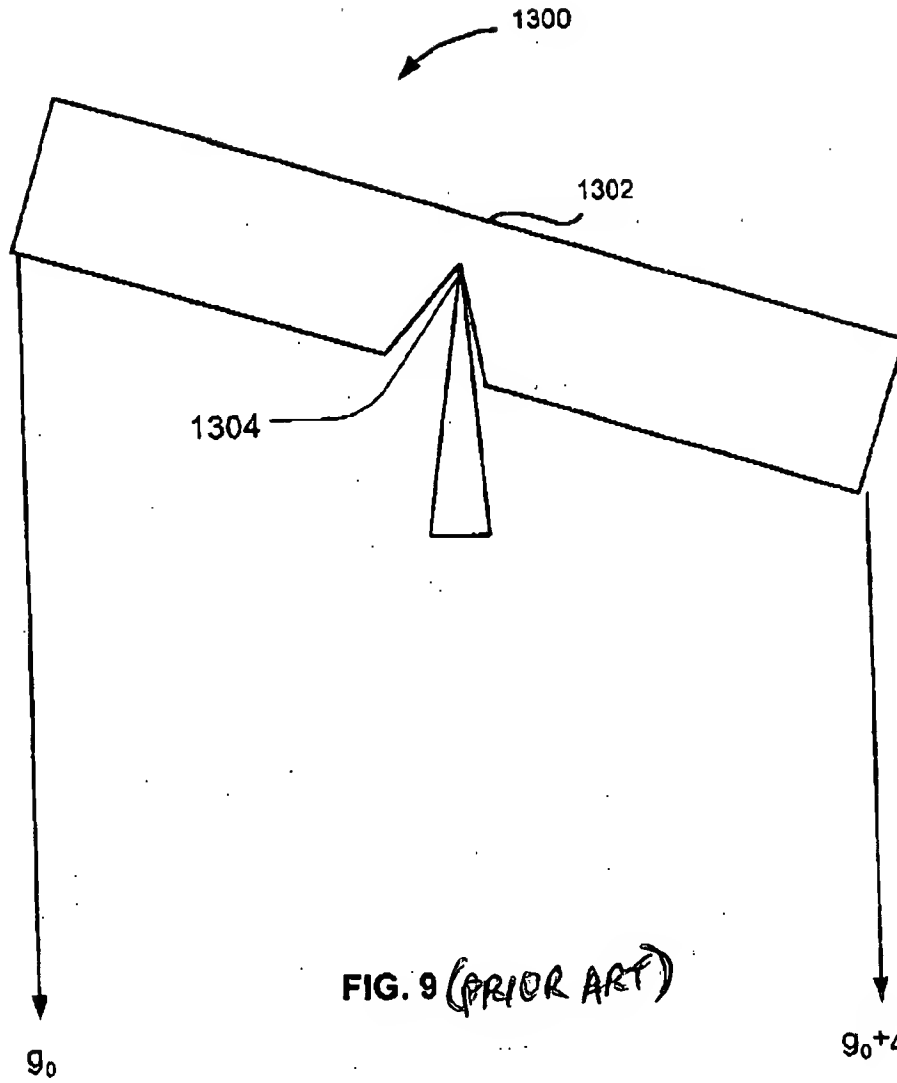


FIG. 9 (PRIOR ART)

RECEIVED  
MAY 28 2003  
JC 2800 MAIL ROOM